



## WORKING GROUP FORM

**CIGRE Study Committee:** D1

<b>WG number:</b> D1.43	<b>Name of Convener:</b> A. Cavallini (IT)
<b>Title:</b> Rotating machine insulation voltage endurance under fast, repetitive voltage transients	
<b>Terms of reference</b>	
<b>Scope:</b> The purpose of the working group is to clarify a number of questions related to the severity of the influence of different parameters when exposing rotating machine insulation to repetitive transients. In particular, the working group will prepare a report covering the following: <ul style="list-style-type: none"><li>- Influence of pulse amplitude, slew rate, repetition rate and duty cycle on the voltage endurance of rotating machine insulation, based on theoretical considerations and existing literature data.</li><li>- Review of existing accelerated life test methods for rotating machine insulation under fast repetitive voltage transients, highlighting the most suitable one to ensure reliable results.</li></ul> Since relevant aging mechanisms are different for type I (wire wound) and II (form wound) rotating machine insulation, these will be treated separately. Keywords here are: partial discharges, dielectric heating, and space charge.	
<b>Deliverables</b> Electra paper and/or a technical brochure.	
<b>Time schedule:</b> 2011: Kick-off meeting: definition of activities; appointment of WG members, task distribution 2012: Overview of possible methods, decision on the testing method to be chosen; initiate laboratory work 2013: Result analysis, identification of missing issues; finalize laboratory work 2014: Final report	
<b>Other SCs concerned by the work:</b> The work should be carefully coordinated with activities within SC A1	
<b>Approval by TC Chairman:</b> Klaus Fröhlich	<b>Date:</b> 15/12/2010